

- 163. The method of claim 162, wherein said stem cell comprises a bone marrow stem cell.
- 164. The method of claim 162, wherein said stem cell comprises a blood stem cell.
- 165. The method of claim 160, wherein said cell comprises a germinal cell.
- 166. The method of claim 160, wherein said cell comprises a cloned cell.
- 167. The method of claim 160, wherein said cell comprises a cultured cell.
- 168. The method of claim 159, wherein said growth factor comprises extracellular matrix.
- 169. The method of claim 159, wherein said growth factor comprises a gene.
- 170. The method of claim 159, further comprising inserting a physiological nutrient culture at a desired location of said human body to promote cellular survival.
- 171. The method of claim 170, wherein said physiological nutrient culture is inserted with said growth factor.
- 172. The method of claim 170, wherein said physiological nutrient culture is inserted at the same location as said growth factor.
- 173. The method of claim 159, further comprising inserting a cell nutrient culture at a desired location of said human body to promote cellular survival.
- 174. The method of claim 173, wherein said cell nutrient culture is inserted with said growth factor.
- 175. The method of claim 173, wherein said cell nutrient culture is inserted at the same location as said growth factor.
- 176. The method of claim 160 further comprising inserting a physiological nutrient culture at a desired location in said human body to promote cellular survival.
- 177. The method of claim 176, wherein said physiological nutrient culture is inserted with said growth factor.

178. The method of claim 176, wherein said physiological nutrient culture is inserted at the same location as said growth factor.
179. The method of claim 160 further comprising inserting a cell nutrient culture at a desired location in said human body to promote cellular survival.
180. The method of claim 179, wherein said cell nutrient culture is inserted with said growth factor.
181. The method of claim 179, wherein said cell nutrient culture is inserted at the same location as said growth factor.
182. The method of claim 159 further comprising inserting a physiological medium at a desired location in said human body to promote cellular survival.
183. The method of claim 182, wherein said physiological medium is inserted with said growth factor.
184. The method of claim 182, wherein said physiological medium is inserted at the same location as said growth factor.
185. The method of claim 160 further comprising inserting a physiological medium at a desired location in said human body to promote cellular survival.
186. The method of claim 185, wherein said physiological medium is inserted with said growth factor.
187. The method of claim 185, wherein said physiological medium is inserted at the same location as said growth factor.
188. A method for treating arthritis of an avascular necrosis nature comprising inserting a growth factor at a desired location in the body of a human patient to grow a member selected from the group consisting of blood vessel, bone, and blood vessel and bone to correct said avascular necrosis.

189. The method of claim 188, wherein said growth factor is inserted proximate to a joint of said human patient.
190. The method of claim 188, wherein said member comprises a blood vessel located at a joint of said human patient.
191. The method of claim 188, wherein said member comprises bone located at a joint of said human patient.
192. The method of claim 188, wherein said growth factor comprises a member selected from the group consisting of cells, cellular products, and derivatives of cellular products.
193. The method of claim 189, wherein said growth factor comprises a cell.
194. The method of claim 193, wherein said cell comprises a stem cell.
195. The method of claim 194, wherein said stem cell comprises a bone marrow stem cell.
196. The method of claim 194, wherein said stem cell comprises a blood stem cell.
197. The method of claim 193, wherein said cell comprises a germinal cell.
198. The method of claim 193, wherein said cell comprises a cloned cell.
199. The method of claim 193, wherein said cell comprises a cultured cell.
200. The method of claim 193, wherein said growth factor comprises a gene.
201. The method of claim 200, wherein said gene comprises VEGF gene.
202. The method of claim 200, wherein said gene comprises BMP gene.
203. The method of claim 192, wherein said growth factor comprises a growth factor produced by a gene.
204. The method of claim 203, wherein said growth factor comprises VEGF growth factor produced by a VEGF gene.
205. The method of claim 203, wherein said growth factor comprises BMP growth factor produced by BMP genes.

- 206. The method of claim 188 further comprising inserting a physiological nutrient culture at a desired location of said human body to promote cellular survival.
- 207. The method of claim 206, wherein said physiological nutrient culture is inserted with said growth factor.
- 208. The method of claim 206, wherein said physiological nutrient culture is inserted at the same location as said growth factor.
- 209. The method of claim 189 further comprising inserting a physiological nutrient culture at a desired location in said human body to promote cellular survival.
- 210. The method of claim 209, wherein said physiological nutrient culture is inserted with said growth factor.
- 211. The method of claim 209, wherein said physiological nutrient culture is inserted at the same location as said growth factor.
- 212. The method of claim 188 further comprising inserting a cellular nutrient culture at a desired location of said human body to promote cellular survival.
- 213. The method of claim 212, wherein said cellular nutrient culture is inserted with said growth factor.
- 214. The method of claim 212, wherein said cellular nutrient culture is inserted at the same location as said growth factor.
- 215. The method of claim 189 further comprising inserting a cellular nutrient culture at a desired location in said human body to promote cellular survival.
- 216. The method of claim 215, wherein said cellular nutrient culture is inserted with said growth factor.
- 217. The method of claim 215, wherein said cellular nutrient culture is inserted at the same location as said growth factor.

- 218. The method of claim 188 further comprising inserting a physiological medium at a desired location of said human body to promote cellular survival.
- 219. The method of claim 218, wherein said physiological medium is inserted with said growth factor.
- 220. The method of claim 218, wherein said physiological medium is inserted at the same location as said growth factor.
- 221. The method of claim 189 further comprising inserting a physiological medium at a desired location in said human body to promote cellular survival.
- 222. The method of claim 221, wherein said physiological medium is inserted with said growth factor.
- 223. The method of claim 221, wherein said physiological medium is inserted at the same location as said growth factor.

LISTING OF CLAIMS

Claims 1-158
(canceled)

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| Claim 159 (new) | A method for treating arthritis comprising inserting a growth factor at a desired location in a human patient to reduce inflammation. |
| Claim 160 (new) | The method of claim 159, wherein said growth factor comprises a member selected from the group consisting of cells, cellular products, and derivatives of cellular products. |
| Claim 161 (new) | The method of claim 160, wherein said growth factor comprises a cell. |
| Claim 162 (new) | The method of claim 161, wherein said cell comprises a stem cell. |
| Claim 163 (new) | The method of claim 162, wherein said stem cell comprises a bone marrow stem cell. |
| Claim 164 (new) | The method of claim 162, wherein said stem cell comprises a blood stem cell. |
| Claim 165 (new) | The method of claim 160, wherein said cell comprises a germinal cell. |
| Claim 166 (new) | The method of claim 160, wherein said cell comprises a cloned cell. |

- Claim 167 (new) The method of claim 160, wherein said cell comprises a cultured cell.
- Claim 168 (new) The method of claim 159, wherein said growth factor comprises extracellular matrix.
- Claim 169 (new) The method of claim 159, wherein said growth factor comprises a gene.
- Claim 170 (new) The method of claim 159, further comprising inserting a physiological nutrient culture at a desired location of said human body to promote cellular survival.
- Claim 171 (new) The method of claim 170, wherein said physiological nutrient culture is inserted with said growth factor.
- Claim 172 (new) The method of claim 170, wherein said physiological nutrient culture is inserted at the same location as said growth factor.
- Claim 173 (new) The method of claim 159, further comprising inserting a cell nutrient culture at a desired location of said human body to promote cellular survival.
- Claim 174 (new) The method of claim 173, wherein said cell nutrient culture is inserted with said growth factor.
- Claim 175 (new) The method of claim 173, wherein said cell nutrient culture is inserted at the same location as said growth factor.
- Claim 176 (new) The method of claim 160 further comprising inserting a physiological nutrient culture at a desired location in said human body to promote cellular survival.

- Claim 177 (new) The method of claim 176, wherein said physiological nutrient culture is inserted with said growth factor.
- Claim 178 (new) The method of claim 176, wherein said physiological nutrient culture is inserted at the same location as said growth factor.
- Claim 179 (new) The method of claim 160 further comprising inserting a cell nutrient culture at a desired location in said human body to promote cellular survival.
- Claim 180 (new) The method of claim 179, wherein said cell nutrient culture is inserted with said growth factor.
- Claim 181 (new) The method of claim 179, wherein said cell nutrient culture is inserted at the same location as said growth factor.
- Claim 182 (new) The method of claim 159 further comprising inserting a physiological medium at a desired location in said human body to promote cellular survival.
- Claim 183 (new) The method of claim 182, wherein said physiological medium is inserted with said growth factor.
- Claim 184 (new) The method of claim 182, wherein said physiological medium is inserted at the same location as said growth factor.
- Claim 185 (new) The method of claim 160 further comprising inserting a physiological medium at a desired location in said human body to promote cellular survival.
- Claim 186 (new) The method of claim 185, wherein said physiological medium is inserted with said growth factor.

- Claim 187 (new) The method of claim 185, wherein said physiological medium is inserted at the same location as said growth factor.
- Claim 188 (new) A method for treating arthritis of an avascular necrosis nature comprising inserting a growth factor at a desired location in the body of a human patient to grow a member selected from the group consisting of blood vessel, bone, and blood vessel and bone to correct said avascular necrosis.
- Claim 189 (new) The method of claim 188, wherein said growth factor is inserted proximate to a joint of said human patient.
- Claim 190 (new) The method of claim 188, wherein said member comprises a blood vessel located at a joint of said human patient.
- Claim 191 (new) The method of claim 188, wherein said member comprises bone located at a joint of said human patient.
- Claim 192 (new) The method of claim 188, wherein said growth factor comprises a member selected from the group consisting of cells, cellular products, and derivatives of cellular products.
- Claim 193 (new) The method of claim 189, wherein said growth factor comprises a cell.
- Claim 194 (new) The method of claim 193, wherein said cell comprises a stem cell.
- Claim 195 (new) The method of claim 194, wherein said stem cell comprises a bone marrow stem cell.

- Claim 196 (new) The method of claim 194, wherein said stem cell comprises a blood stem cell.
- Claim 197 (new) The method of claim 193, wherein said cell comprises a germinal cell.
- Claim 198 (new) The method of claim 193, wherein said cell comprises a cloned cell.
- Claim 199 (new) The method of claim 193, wherein said cell comprises a cultured cell.
- Claim 200 (new) The method of claim 193, wherein said growth factor comprises a gene.
- Claim 201 (new) The method of claim 200, wherein said gene comprises VEGF gene.
- Claim 202 (new) The method of claim 200, wherein said gene comprises BMP gene.
- Claim 203 (new) The method of claim 192, wherein said growth factor comprises a growth factor produced by a gene.
- Claim 204 (new) The method of claim 203, wherein said growth factor comprises VEGF growth factor produced by a VEGF gene.
- Claim 205 (new) The method of claim 203, wherein said growth factor comprises BMP growth factor produced by BMP genes.
- Claim 206 (new) The method of claim 188 further comprising inserting a physiological nutrient culture at a desired location of said human body to promote cellular survival.

- Claim 207 (new) The method of claim 206, wherein said physiological nutrient culture is inserted with said growth factor.
- Claim 208 (new) The method of claim 206, wherein said physiological nutrient culture is inserted at the same location as said growth factor.
- Claim 209 (new) The method of claim 189 further comprising inserting a physiological nutrient culture at a desired location in said human body to promote cellular survival.
- Claim 210 (new) The method of claim 209, wherein said physiological nutrient culture is inserted with said growth factor.
- Claim 211 (new) The method of claim 209, wherein said physiological nutrient culture is inserted at the same location as said growth factor.
- Claim 212 (new) The method of claim 188 further comprising inserting a cellular nutrient culture at a desired location of said human body to promote cellular survival.
- Claim 213 (new) The method of claim 212, wherein said cellular nutrient culture is inserted with said growth factor.
- Claim 214 (new) The method of claim 212, wherein said cellular nutrient culture is inserted at the same location as said growth factor.
- Claim 215 (new) The method of claim 189 further comprising inserting a cellular nutrient culture at a desired location in said human body to promote cellular survival.
- Claim 216 (new) The method of claim 215, wherein said cellular nutrient culture is inserted with said growth factor.

- Claim 217 (new) The method of claim 215, wherein said cellular nutrient culture is inserted at the same location as said growth factor.
- Claim 218 (new) The method of claim 188 further comprising inserting a physiological medium at a desired location of said human body to promote cellular survival.
- Claim 219 (new) The method of claim 218, wherein said physiological medium is inserted with said growth factor.
- Claim 220 (new) The method of claim 218, wherein said physiological medium is inserted at the same location as said growth factor.
- Claim 221 (new) The method of claim 189 further comprising inserting a physiological medium at a desired location in said human body to promote cellular survival.
- Claim 222 (new) The method of claim 221, wherein said physiological medium is inserted with said growth factor.
- Claim 223 (new) The method of claim 221, wherein said physiological medium is inserted at the same location as said growth factor.

This Preliminary Amendment is submitted in an effort to advance the prosecution of the instant application. An early examination of the application is respectfully requested.

Respectfully submitted,

Date: March 2, 2004

A handwritten signature in black ink, appearing to read "Gerald K. White", is written over a horizontal line.

Gerald K. White
Reg. No. 26,611

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